



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,340	07/25/2005	Boris Z Gorbunov	WRAS-1-PCT	9307
7590				
Ronald B Sherer				
Bartlett & Sherer				
103 South Shaffer Drive				
New Freedom, PA 17349				
		EXAMINER		
		RODRIGUEZ, JOSEPH C		
		ART UNIT		
		PAPER NUMBER		
		3653		
		MAIL DATE		
		DELIVERY MODE		
		10/24/2007		
		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/519,340

Applicant(s)

GORBUNOV ET AL.

Examiner

Joseph C. Rodriguez

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/22/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

Here, Examiner acknowledges receipt of the International Search Report.

The references cited in the Search Report have been considered and will be listed on any patent resulting from this application to the extent the references have been provided to the Office and are listed on an accompanying PTO-1449 form. See 37 CFR 1.98(a)(1); MPEP 1893.03(g).

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of claims 26-28 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

Art Unit: 3653

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to as lacking appropriate section headings as outlined in 37 CFR 1.77. See also 37 CFR 1.72-1.77; MPEP § 608.01(a). Correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter (see e.g., claims 26-28 and 34). See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction is required.

### ***Claim Objections***

The claims are objected to as the form of claims 15-35 is improper. Where a claim sets forth a plurality of elements or steps, as in the instant claims, each element or step should be separated by a line indentation. See MPEP 608.01(m) and 37 CFR 1.75(i).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

Art Unit: 3653

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 26-28 and 34-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. These claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

These claims are also rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Therefore, as the features of these claims are not even contained in the written description or drawings, Applicant has failed to provide a proper written description of the claimed subject matter and these claims stand rejected.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15, 16, 19-23, 26 and 29-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Gorbunov et al. ("Gorbunov")(EP 1 041 377 A2).

Gorbunov (Fig. 3) teaches a particle collector for collecting and sampling particles in a fluid which comprises sequentially

- (i) an inlet (2; para. 22 teaching flow regulator)
- (ii) a first collector (sedimentation unit 8) adapted to collect larger particles and
- (iii) a second collector (5) adapted to collect smaller particles which second collector comprises a chamber in which there is at least one net (para. 32-34 teaching nets of different sizes capturing particles of differing sizes) or another material containing fibres placed across the chamber and a flow means able to sustain a flow of fluid sequentially through the inlet, first collector and second collector, wherein an optical particle counter is used (para. 43). Further, Applicant is respectfully reminded that claim language consisting of functional language and/or intended use phrasing is given little, if any, patentable weight as the apparatus must merely be capable of functioning, or being used, as claimed. See MPEP 2112.02, 2114. Here, the device cited above is certainly capable of having the first collector collect particles larger than 0.3 um and the second collector collect particles smaller than 0.3 um and. 21 and having said nets operate under different flow-rates or collect "large" particles.

Here, the method claims are anticipated in the normal operation of the device cited above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3653

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-18, 24-25 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorbunov in view of Lee et al. ("Lee")(US 6,506,345) and Koutrakis et al. ("Koutrakis")(US 5,932,795).

Gorbunov as set forth above teaches all that is claimed except for expressly teaching a humidity control unit comprising a heater and a humidity sensor incorporated between the inlet and the large particle collector, wherein there is a saturator located upstream of the first collector and the fluid is dragged through the collector by a higher pressure generating means. These features, however, are well-known in the particle sampling arts. For instance, Lee teaches drawing an aerosol through sampling unit with a vacuum pump, wherein a saturator (24) and heater (28) are employed prior to the first collector to improve with sample collection (Fig. 1; col. 4, ln. 25-col. 6, ln. 60). Koutrakis further teaches the use of a humidity control unit to assist in regulating the heater and to improve particle collection (Fig. 1, 3, 6; col. 18, ln. 23 et seq. teaching use of heater and humidity probe to control humidity of particle flow). It would thus be obvious to one with ordinary skill in the art to modify the base reference with these prior art teachings to arrive at the claimed invention. The rationale for this obviousness determination can be found in the prior art itself that teaches that controlling the humidity and saturation of the incoming fluid allows better particle sampling (Lee, col. 2, ln. 30-45; col. 8, ln. 8 et seq.). Further, the prior art discussed and cited demonstrates the level of sophistication of one

Art Unit: 3653

with ordinary skill in the art and that these modifications would be well within this skill level. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Gorbunov for the reasons set forth above.

### ***Conclusion***

Any references not explicitly discussed above but made of record are considered relevant to the prosecution of the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Joseph C Rodriguez** whose telephone number is **571-272-6942** (M-F, 9 am – 6 pm, EST). The Supervisory Examiner is Patrick Mackey, **571-272-6916**. The **Official** fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

The examiner's **UNOFFICIAL Personal fax number** is **571-273-6942**.

Further, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see

**<http://pair-direct.uspto.gov>**

Should you have questions on access to the Private PMR system, contact the Electronic Business Center (EBC) at **866-217-9197** (Toll Free).



Application/Control Number: 10/519,340  
Art Unit: 3653

Page 8

Signed by Examiner /Joseph Rodriguez/

Jcr

\*\*\*

October 19, 2007

A handwritten signature in black ink, appearing to be 'JR' with a long, sweeping horizontal line extending to the right.